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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,789	09/23/2003	Frank M. Steranka	LUM-01-09-01-1D	6404
32566	7590	09/23/2004	EXAMINER	
PATENT LAW GROUP LLP			ROY, SIKHA	
2635 NORTH FIRST STREET			ART UNIT	
SUITE 223			PAPER NUMBER	
SAN JOSE, CA 95134			2879	

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/669,789

Applicant(s)

STERANKA ET AL.

Examiner

Sikha Roy

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4 and 6-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3,4 and 6-13 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

The Amendment, filed on July 9, 2004 has been entered and overcomes the rejection of claims 3,4,12 and 13 under 35 U.S.C. § 102(b), and claim 10 under 35 U.S.C. § 103(a).

Cancellation of claims 2 and 5 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claim 1 the limitation reciting 'a metal contact disposed on the first surface' is not described in the specification. The specification (page 7 [0034] Fig. 10) discloses the device has transparent contact 82, contacting the light extracting first surface but it does not exemplify the transparent contact being metal. The reflective material 22 is metal and wire bonds 80 are connected to this metal reflective material 22 for making electrical contact to the transparent contact 82.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,120,909 to Bojarczuk et al. and further in view of U.S. Patent 3,877,052 to Dixon et al.

Regarding claim 1 Bojarczuk discloses (Figs. 1,2 column 3 lines 21-58) a light emitting device comprising a light emitting diode comprising substrate 1, a plurality of semiconductor layers 2, 3, 4, 5 and 6, a metal contact 7 disposed on a first surface 6 of the plurality of semiconductor layers wherein light is extracted through this first surface, the contact 7 being transparent (made thin enough to permit the passage of visible light) and contact fingers 11 feeding the adjacent thin light transparent contact layer 7.

Claim 1 differs from Bojarczuk in that Bojarczuk does not exemplify the layer having aperture through which light exits and overlying a portion of the first surface to be reflective.

Dixon in analogous art of light emitting diode discloses (Fig. 1 column 1 lines 64 through column 2 line 5, column 4 lines 1-5, 20-25) light emitting diode 10 having optically reflective metal layers 15,16 (typically silver) overlying multi-layer semiconductor structure for reflecting optical radiation coming from the semiconductor.

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Dixon further notes that the metallic reflecting layer serves the function of reflecting the non-totally internally reflected rays emanating from the semiconductor body back into the semiconductor body thus increasing opportunities for acceptance of these rays into exit (the optical fiber) and correspondingly increasing the efficiency.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the metallic layer (fingers) 11 overlying a portion of the first surface of the diode of Bojarczuk by reflective metal as suggested by Dixon for reflecting the non-totally internally reflected rays emanating from the semiconductor body back into the semiconductor body thus increasing opportunities for acceptance of these rays into exit (transparent contact layer 7) and correspondingly increasing the efficiency of the device.

Allowable Subject Matter

Claims 3,4,6-13 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

Regarding claim 3 the prior art of record fails to teach or suggest the light emitting device with all the limitations as claimed in claim 3 and particularly the limitation of the first and third surfaces forming a wedge with an apex opposite the exit surface and the second and the fourth surfaces being substantially parallel.

Claims 4,6-13 are allowable because of their dependency status from claim 3.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sikha Roy
Patent Examiner
Art Unit 2879



NIMESHKUMAR D. PATEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800